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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/705,929	11/06/2000	Young-Sun Kim	P56228	7508

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EXAMINER

AWAD, AMR A

ART UNIT PAPER NUMBER

2675

DATE MAILED: 09/25/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Signature

Office Action Summary

Application No.

09/705,929

Applicant(s)

KIM, YOUNG-SUN

Examiner

Amr Awad

Art Unit

2675

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 06 November 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-49 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,18,29-43 and 47-49 is/are rejected.
- 7) ☒ Claim(s) 2-17,19-28 and 44-46 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5,6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

2. The references cited in the Information Disclosure Statements filed November 6, 2000 and January 3, 2002 have been considered by the Examiner; see attached PTO-1449.

Specification

3. The disclosure is objected to because of the following informalities: the specification includes some topographical errors, such as for example, on page 2, line 2, "isplay" should be changed to --display--. Applicant is advised to correct this minor error and any other errors that may be included in the specification.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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5. Claims 1, 18, 29-43 and 47-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hong (US patent NO. 5,706,063; provided by the Applicant) in view of Kunihiro (Japanese patent Publication NO. 10-198320).

As to independent claim 1, Hong (figure 1) teaches a display that includes a first beam splitter passing a first wavelength band of colored light received, and reflecting a second wavelength band of the plurality of colored lights received (col. 2, line 64 through col. 3, line 6). Hong teaches a first panel (LCD panel 37) receiving the first wavelength band of the plurality of colored lights, receiving color data and panel control signals, and outputting first incident light corresponding to the received color data, and a second panel (LCD panel 38) receiving the second wavelength band of the plurality of colored lights, receiving the color data and panel control signals, outputting second incident light corresponding to the received color data in accordance with the panel control signals to display the received color data (col. 3, lines 6-43).

Hong does not teach having the first panel displaying the received color data starting from the most significant bit, and the second panel displaying the received data starting from the least significant bit to the most significant bit.

However, Kunihiro (figure 1) teaches a liquid display device that includes a first and second display panels (1 and 2) wherein one of the first or second panels receives the display data from the most significant bit and, the other panel receives the display data from the least significant bit (see English abstract, and paragraph 015 of the electronic English translation).

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Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include the teaching of Kunihiro having two display panels which receive data bits opposite to each other, to be included in Hong's device so as motivated by Kunihiro, to be able to provide an LCD display which has no crossover wiring and applicable to chip-on-glass (see problem to be solved in the abstract).

As to independent claim 18, the claim is similar to independent in reciting a first panel for receiving wavelength components of a plurality of colored lights and receiving the color data starting from the most significant bit the least significant bit, and a second panel for receiving different wavelength components of the plurality of colored lights, and receiving the color data starting from the least significant bit to most significant bit. As can be seen above, with respect to the rejection of claim 1 above, these limitations are taught by the combination of Hong and Kunihiro. The claim also recites light unit for emitting a white light and a color switching unit receiving the white light , and separating the white light into a plurality of colored lights. Hong teaches a light source (31) which fairly reads on the claimed limitation of white color (col. 2, lines 64-66 and col. 3, lines 28-43), and the beam splitter (32) disclosed in Hong's device is fairly equivalent to the color witching unit.

As to independent claim 29, the claim is substantially similar to independent claim 18 adding to it the beam splitter, which is taught by Hong. Therefore, the claim would be analyzed as previously discussed with respect to claim 18 above.

As to claims 30-32, Hong shows having the switching unit outputting each one of the plurality of colored light in accordance with the color switch signals (see figure 4), and wherein the colored lights output from the color switching unit corresponding to red, green and blue lights (col. 3, lines 59-65), and outputting one light while blocking the other color lights (col. 3, lines 59-65).

As to claim 33, as can be seen above, both reference disclose an LCD display devices. Using a Ferro-electric LCD would be obvious to a person of ordinary skill in the art at the time the invention was made because Ferro-electric displays known for its power efficiency and affordability.

As to claim 34, the LCD display is equivalent to electric shutter.

As to claims 35-41, the claims are method claims, which corresponds to apparatus claims 29-34, and would be analyzed as previously discussed with respect the apparatus of claims 29-34.

As to claims 42-43 and 47-49, the limitations in these claims are all substantially similar to the limitations included either in independent claims 1, 18, 29 and 35, and dependent claim 40, which are rejected above, and would be analyzed as previously discussed with respect to claims 1, 18, 29, 35 and 40 above.

Allowable Subject Matter

6. Claims 2-17, 19-28, and 44-46 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Mushiake et al. (US patent NO. 6,005,655) teaches a projector capable of projecting polarized illumination light.

Gale et al. (US patent NO. 5,909,204) teaches a color display system with spatial light modulators.

Okano (US patent NO. 6,025,818) teaches a method for correcting pixel data in a self-luminous display panel driving system.

Iwamura et al. (US patent NO. 6,186,629) teaches an optical device that includes a beam splitter.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amr Awad whose telephone number is (703)308-8485. The examiner can normally be reached on Monday-Friday, between 9:00AM to 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Saras can be reached on (703)305-9720. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-4750.



A.A.